

REMARKS

Interview

Applicant would like to express its appreciation for the courtesy shown to applicant's representative during the interview conducted on March 25, 2008. The present amendment is being submitted pursuant to that interview.

Claim 1 and its dependent claims

Independent Claims 1 has been rejected under 35 U.S.C. §§ 102 or 103 based on French Pat. No. 2,767,810 to Boscher et al. (hereinafter "Boscher"), either alone or in combination with brochures published by the W. Haldenwanger company, as well as the NIST materials property data summary for sintered silicon carbide.

Claim 1 as amended recites a method comprising a method step in which a glass blank is supplied to a heating zone, softened zonewise, and a glass strand is drawn off using a draw-off device at a controlled drawing speed from the softened area. The draw-off device comprises a first draw-off unit with rolling bodies rolling on said glass strand distributed around the circumference thereof. The rolling bodies including a reference rolling body and at least one auxiliary rolling body. The reference rolling body and the auxiliary rolling body each has a respective varying torque acting thereon dependent on a variable weight of the drawn-off glass strand. The drawing speed is controlled by setting a speed of the reference rolling body. A value correlated to the torque acting on the reference rolling body is determined, and the determined value is used as a setpoint torque for adjusting the torque acting on the auxiliary rolling body. The value is determined repeatedly or continuously, and the setpoint torque is a

variable setpoint torque used to repeatedly or continuously adjust the torque of the auxiliary rolling body.

This method is advantageous for producing glass strands, e.g., cylindrical tubes compared with prior art methods. Prior art systems generally have encountered a problem in that irregular wear in the rollers and changes in the weight of the strand as it is drawn and cut, and also gearing differences in the rollers can produce surface damage in the strand. See Specification, page 2, lines 11 to 14, page 4, lines 16 to 17. The present invention avoids these problems because the rolling bodies apply appropriate drawing force to the strand as it lengthens and grows heavier or lighter when it is cut.

The Examiner has cited Boscher to suggest or anticipate the present invention. Boscher shows rollers 4, 12, 14, and 16. Together these rollers apply a total traction force T in the downstream direction of the tube. Boscher translation, page 11, lines 12 to 14. That force is determined as a function of oven temperature. Boscher translation, page 11, lines 14 to 15. Boscher does not suggest that this force T changes over time, and T is apparently constant over time, having no relation to the changing weight of the strand or any other time-varying aspects of the claimed method.

Boscher does not show or suggest either the step of claim 1 of determining the torque on the reference rolling body or the step of using that varying torque as a setpoint for the torque of the auxiliary rolling body, and therefore cannot be said to anticipate or render obvious the invention as presently claimed.

Furthermore, in contrast with the claimed invention where the torque of the auxiliary rolling body adjusted to a setpoint of the torque on the reference rolling body, Boscher actually

teaches applying *unequal torques* on wheel 4 and its cooperating roller 12. Specifically, Boscher teaches that each pair of opposing rollers applies equal traction forces on the tube 32. See Boscher, Page 12, lines 2-6, (stating that $T_R = T_1$). At the same time, Figures 1-3 depict the reference roll 4 as having a much larger radius than the other traction roller 12. Consequently, the torque applied on the larger roller and the torque applied on the smaller roller must be different to produce the same traction force due to the widely differing radii of the two wheels.

In addition, it should be noted that a significant factor in the problems of the prior art is the varying weight of the strand being drawn. Boscher is apparently a system for making capillary tubes that seemingly are so light in weight that the changing weight of the tube is negligible. Also it may be seen from Boscher Figure 3, that the tube is supported by a horizontal roller system 40, and that the weight of the tube if any is constant at the upper drawing system of wheel 4.

Boscher therefore teaches a constant drawing force that does not take into account the weight of the tube as it is drawn. Boscher nowhere suggests determining a variable torque acting on the reference rolling body and using that determined value as a variable setpoint torque for adjusting the torque acting on its auxiliary rolling bodies.

Therefore, Boscher does not teach or suggest the present invention, and reconsideration of the rejection is respectfully requested.

Claims 2 to 11 and 21 to 28 depend directly or indirectly from claim 1 and therefore distinguish therewith.

Independent claim 29 as amended recites a method for producing a cylindrical glass body in a vertical drawing process in which the reference rolling body torque value is used as a

variable setpoint torque for the torque acting on the auxiliary rolling body, and claim 29 distinguishes over the cited prior art for reasons similar to those expressed above in regard to claim 1. Its allowance, together with its depending claim 30, is respectfully requested.

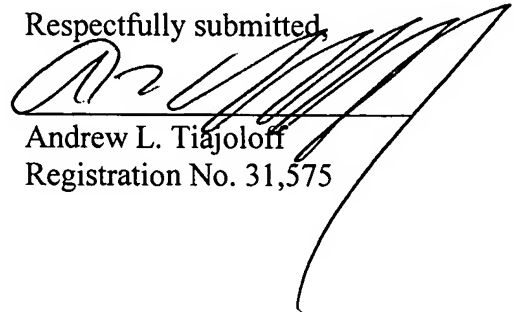
All claims having been shown to distinguish over the prior art in structure, function and result, formal allowance is respectfully requested.

Should any questions arise, the Patent Office is invited to telephone attorney for applicants at 212-490-3285.

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Respectfully submitted,



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